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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,167	02/04/2002	Anthony D. Kurtz	Kulite-69	4919
45722	7590	04/25/2006	EXAMINER	
PLEVY & HOWARD, P.C. P.O. BOX 226 FORT WASHINGTON, PA 19034			NECKEL, ALEXA DOROSHENK	
			ART UNIT	PAPER NUMBER
			1764	

DATE MAILED: 04/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No.

10/067,167

Applicant(s)

KURTZ, ANTHONY D.

Examiner

Alexa D. Neckel

Art Unit

1764

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 13 April 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

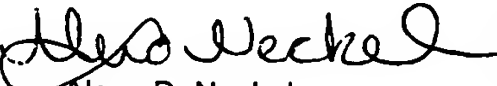
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: \_\_\_\_\_.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). \_\_\_\_\_.  
13. ☐ Other: \_\_\_\_\_.

  
Alexa D. Neckel  
Primary Examiner  
Art Unit: 1764

Continuation of 11. does NOT place the application in condition for allowance because of the following reasons:

35 USC 112, Second Paragraph

Applicant argues that because 4815 issued U.S. patents use the term "preferentially" that it cannot possibly be indefinite.

The examiner respectfully disagrees. The fact that a term has been used in claims of issued patents does not thereby establish that particular term as forever definite in all future claims.

Applicant argues that the term "formed preferentially" means "that the dangling bonds are formed with greater density per unit surface area in the reaction areas than in other areas of the surface".

Again, the examiner respectfully disagrees. Nothing about the general term "preferentially" means density. Density is not mentioned in either the claims or specification in such a way as to direct one to the argued particular definition of "formed preferentially". Even if the examiner were to accept applicant's argued definition of the term, then a 35 USC 112, first paragraph rejection would be required as there is no support in the originally filed disclosure to limit the term to that particular definition.

35 USC 112, First Paragraph

Applicant argues that support for the "preferentially" can be found in the specification and points specifically to paragraphs [0011], [0019], and [0020] and again states that the term "formed preferentially" means "that the dangling bonds are formed with greater density per unit surface area in the reaction areas than in other areas of the surface".

The examiner respectfully disagrees. While the cited paragraphs discuss "localized reaction sites", none of the cited paragraphs uses or defines the term "preferentially" nor discusses the density of bonds.

35 USC 102 and 103

Applicant argues that the examiner has "chosen to disregard the word 'preferentially' in her examination of the claims".

The examiner respectfully disagrees and points out on Paragraph 3 of the Final Office Action where the examiner indicated that the term was indefinite and that the examiner was applying the broadest reasonable interpretation of this limitation in the claim. The broadest interpretation was defined by the examiner in that paragraph as wherein bonds are included at, but not limited to, intersections of channels. The term was not disregarded simply because the examiner did not apply applicant's now argued and unsupported definition of the term, rather the term was treated as defined in its broadest reasonable interpretation as established in paragraph 3 of the Final Office Action.

It is noted that during patent examination, the claims are given the broadest reasonable interpretation consistent with the specification. See *In re Morris*, 127 F.3d 1048, 44 USPQ2d 1023 (Fed. Cir. 1997). See MPEP § 2111 - § 2116.01 for case law

pertinent to claim analysis. MPEP 904.01. In this instance, the claims recite limitations not discussed or supported by the specification and therefor those limitations have been given their broadest reasonable interpretation.

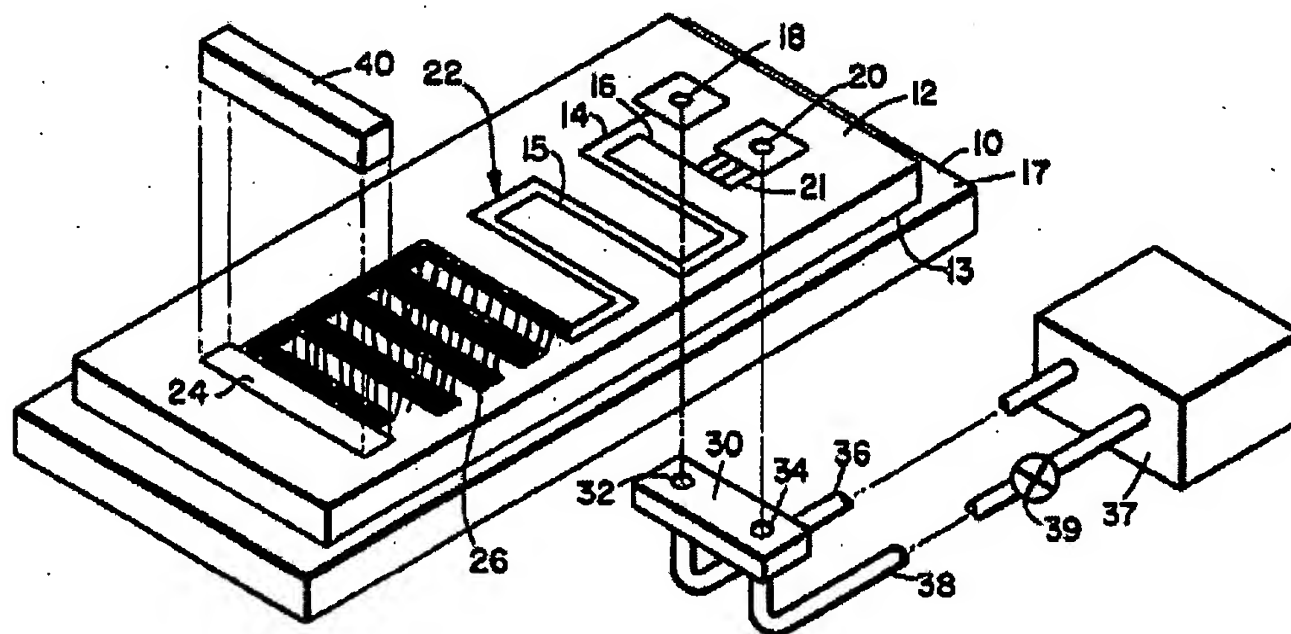
In the rejection the examiner established that bonds are formed over the entire wafer and therefor are included at the "preferred" location of channel intersections. The claims use the traditional transitional phrase of "comprising" which is inclusive or open-ended and does not exclude additional, unrecited elements (such bonds in other non-preferred locations). See MPEP 2111.03. As such, additional locations for bonds are not excluded from the claims.

With regard to applicant's further arguments the examiner not using applicant's currently asserted definition of the term "preferentially", see the remarks above directed to the examiner's treatment of this term using its broadest reasonable definition.

Applicant argues, with respect to claim 20, that Little fails to disclose an "edge" which would protrude into at least one of the channels and argues that the examiner "has again provided a speculative interpretation of claim language".

The examiner respectfully disagrees. It is noted that claim 20 recites only "at least one edge" without reciting a particular structural element with which the edge belongs. For further clarification, Figure 1 of the Little reference is illustrated below indicating several edges (lined area) and a channel (darkened area) in which it protrudes.

**Fig. 1**



With regard to applicant's arguments that Little does not disclose wherein a "localized high electric field" is produced, it is noted that operational conditions are not given weight in an apparatus claim. MPEP 2114. Even so, the claim only recites that the edge is "suitable" for inducing such a field. Since all of the structural limitations have been met, including the particular materials of construction, it is held that the "edge" in the device of Little would be capable of having such an induced field.

Applicant argues that there is no suggestion to combine the references and argues that the examiner has not provided art to demonstrate that corrosion is a problem in a micro miniature cryogenic device.

The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Little teaches a micro-refrigeration device made up of silicon and borosilicate glass and Ashmead teaches a very general micro-device which can perform heat exchange (refrigeration) also made up of silicon and borosilicate glass and which can resist corrosion, a known problem in refrigeration devices. Obviousness may sometimes be based on the common knowledge of persons skilled in the art without relying on a specific suggestion in a particular reference. *In re Bozek*, 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969). Even so, applicant can look to Ren (6,660,107), column 4, lines 11-17 which recognizes that corrosion can be a problem in a refrigeration device.

Applicant argues that the shape of Ashmead is not disclosed as being effective in a refrigerator.

Even though the examiner has established that Ashmead teaches a device for heat exchange and would be analogous to a refrigerator, change in size and shape is not patently distinct over the prior art absent persuasive evidence that the particular configuration of the claimed invention is significant. See *In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).